

Transportation Engineering Technician

California State Personnel Board Specification

- **Schematic Code:** GK80
- **Class Code:** 3175
- **Established:** 12/01/1956*
- **Revised:** 07/03/2002*
- **Title Changed:** 01/08/1980

Definition

Under supervision, in a first and full journey working level capacity, to do complex nonprofessional highway, bridge, and materials testing engineering office or field work; and to do other related work.

Typical Tasks

Acts as instrument person on highway or bridge location or construction stakeout surveys; sets up, operates, and adjusts all types of precision surveying instruments; keeps survey and construction notes; makes inspections in enforcing compliance with plans and specifications on all phases of highway or bridge construction projects such as earthwork operations, placing of base materials, paving with asphalt or concrete materials, materials control at asphalt or concrete batch plants, culvert construction, piledriving, placing or fabrication of structural steel, and erection of falsework and forms and concrete pours; performs field or laboratory physical tests of highway construction and other materials; assists with research or investigation work on road or bridge materials or methods of construction; calculates traverses or earthwork quantities or prepares them for machine processing; uses engineering and computer-oriented processes to compile data for the design, construction, alteration, maintenance, and operation of a wide variety of transportation engineering projects; analyzes engineering data; gathers field traffic data; performs traffic operational activities including surveillance and incident response; may assist in the preparation of designs, plans, estimates, reports, and specifications for all types of highway and bridge projects; prepares working plans and detailed drawings; plots boundary lines and calculates land areas; may act as a lead person in construction, materials testing, or in other work; and prepares reports and correspondence.

Minimum Qualifications

EITHER I

Experience: One year in the California state service performing duties comparable to those of a Junior Engineering Technician, Range B.

OR II

Education: Two years of education equivalent to completion of a curriculum beyond the 12th grade in either (1) engineering which includes courses in trigonometry and algebra or higher, drafting, computer science, and physics, chemistry, or a comparable physical science; or (2) surveying which includes courses in trigonometry and algebra or higher, drafting, surveying, and computer science.

OR III

Experience: Three years of nonprofessional civil engineering experience. (In the California state service, the Junior Engineering Technician meets this qualification.) and

Education: Equivalent to completion of the 12th grade.

Knowledge and Abilities

Knowledge of: Using and adjusting precision surveying instruments; methods, materials, tools, and equipment used in highway and bridge construction and maintenance work; methods of proportioning and handling portland cement concrete; proportioning and handling bituminous surfacing materials and the handling of asphaltic oils and emulsions; physical characteristics and properties of highway and bridge construction materials and the approved methods and equipment used in making physical tests of construction materials; highway grading, construction, and maintenance; traffic operations, methods, and procedures; conventional and state-of-the-art computer applications to transportation engineering work.

Ability to: Communicate effectively at a level required for successful job performance; use and adjust precision surveying instruments; assist in highway and bridge design work; make accurate engineering calculations; inspect construction work and enforce compliance with plans and specifications; analyze situations accurately and take effective action; prepare reports.

* Note: This was adopted as an SPB Staff Calendar Item.

Updated 6/3/2012